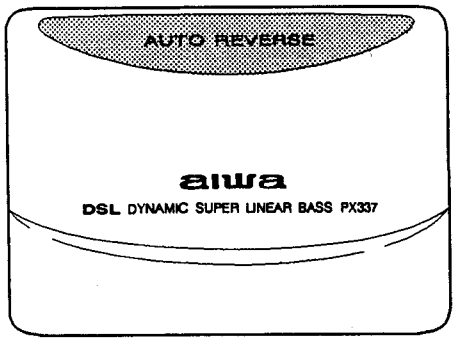
aiwa

HS-PX537
HS-PX337

SERVICE MANUAL



STEREO CASSETTE PLAYER

• BASIC TAPE MECHANISM : OZM – 1AMN

•TYPE. AH, AE, AZ (PX537)
Y, YZ (PX337)

[SUPPLEMENT SERVICE MANUAL]

●Only the modifications are stated in this manual.
Use this manual with HS-PX510, HS-PX310 Service Manual (S/M code NO.0050).

SPECIFICATIONS

HS-PX537

Maximum output
10mW + 10mW (EIAJ/32Ω)
15mW + 15mW (EIAJ/16Ω)
Power source
DC 3V
Dry cell battery: LR-03 (UM-4, AAA, R03 × 2)
DC 2V
Rechargeable battery: AIWA PB-4
Household AC power (using AC adaptor)
Battery life
(EIAJ, playback 1 mW, using PB-4)
Approx. 2 hours [10 minutes (H model is 15 minutes) recharging]
Approx. 4 hours (60 minutes recharging)
Dimensions
108.5 (W) × 81.6 (H) × 25.7 (D) mm
(4 3/8 × 3 1/4 × 1 1/16 in.)
Weight
Approx. 215g (7.5oz)
incl. rechargeable battery
<AC adaptor>
Rated voltage
AC-207H: AC115V/230V, switchable
AC-207E: AC 230V
AC-207K: AC 240V
Rated output
DC 2V 350mA

HS-PX337

Maximum output
10mW + 10mW (EIAJ/32Ω)
15mW + 15mW (EIAJ/16Ω)
Power source
DC 3V
Dry cell battery: LR-03 (UM-4, AAA, R03 × 2)
DC 2V
Rechargeable battery: AIWA PB-4
Household AC power (using AC adaptor)
Weight
Approx. 198g (6.9oz)
Battery life
Alkaline batteries (AAA, LR-03 × 2)
Approx. 8 hours (EIAJ, PB 1mW output)
Manganese batteries (UM-4, AAA, R03 × 2)
Approx. 4 hours (EIAJ, PB 1mW output)
Rechargeable battery (AIWA PB-4)
Approx. 2 hours [EIAJ, PB 1mW/10 minutes (H model is 15 minutes) recharging]
Approx. 4 hours [EIAJ, PB 1mW/60 minutes recharging]
Dimensions
108.5 (W) × 81.6 (H) × 25.7 (D) mm
(4 3/8 × 3 1/4 × 1 1/16 in.)

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

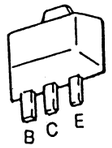
1100

S/M Code No. 09 – 938 – 030 – 40T

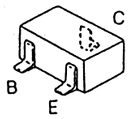
ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
===IC===		
	87-001-351-019	IC, AN6612S
	87-001-875-019	IC, BA1106FS
	87-001-876-019	IC, BA3513AFS
===TRANSISTOR===		
	89-112-134-019	TRANSISTOR, 2SA1213Y
	89-341-165-019	TRANSISTOR, 2SC4116GR
	87-026-472-010	TRANSISTOR, HN1A01F(Y)
	87-026-467-019	TRANSISTOR, HN1C01F(GR)
	87-026-470-019	TRANSISTOR, HN1C03 FB
	87-026-417-019	TRANSISTOR, RN1310
	87-026-428-019	TRANSISTOR, RN2310
	87-026-480-010	TRANSISTOR, RN4605
	87-026-481-010	TRANSISTOR, RN4607
	87-026-482-019	TRANSISTOR, RN4610
===DIODE===		
	87-001-166-019	DIODE, CHIP 1SS301
	87-001-167-019	DIODE, CHIP 1SS302
===MAIN CIRCUIT BOARD SECTION===		
C301	87-012-271-019	CAP, CHIP SS 560P-50 B
C302	87-012-271-019	CAP, CHIP SS 560P-50 B
C303	87-012-271-019	CAP, CHIP SS 560P-50 B
C304	87-012-271-019	CAP, CHIP SS 560P-50 B
C305	87-010-851-019	CAP, CHIP ELECT 47-4
C306	87-010-851-019	CAP, CHIP ELECT 47-4
C307	87-010-786-019	CAP, CHIP SS 0.018-25
C308	87-010-786-019	CAP, CHIP SS 0.018-25
C309	87-016-114-019	CAP, CHIP SS 0.01-25 BJ
C310	87-016-114-019	CAP, CHIP SS 0.01-25 BJ
C311	87-010-805-019	CAP, CHIP S 1-16F
C312	87-010-805-019	CAP, CHIP S 1-16F
C313	87-012-270-019	CAP, CHIP SS 470P-50 B
C314	87-012-270-019	CAP, CHIP SS 470P-50 B
C315	87-010-805-019	CAP, CHIP S 1-16F
C316	87-010-805-019	CAP, CHIP S 1-16F
C317	87-010-674-019	CAP, CHIP ELECT 220-2 MV
C318	87-010-674-019	CAP, CHIP ELECT 220-2 MV
C319	87-012-282-019	CAP, CHIP SS 4700P-50
C320	87-012-282-019	CAP, CHIP SS 4700P-50
C321	87-010-828-019	CAP, CHIP SS 0.033-16
C322	87-010-828-019	CAP, CHIP SS 0.033-16
C323	87-012-286-019	CAP, CHIP SS 0.01-25 B
C324	87-012-286-019	CAP, CHIP SS 0.01-25 B
C325	87-010-828-019	CAP, CHIP SS 0.033-16
C326	87-010-828-019	CAP, CHIP SS 0.033-16
C327	87-010-831-019	CAP, CHIP SS 0.1-16F
C328	87-010-831-019	CAP, CHIP SS 0.1-16F
C329	87-010-805-019	CAP, CHIP S 1-16F
C330	87-010-805-019	CAP, CHIP S 1-16F
C331	87-010-805-019	CAP, CHIP S 1-16F
C332	87-010-805-019	CAP, CHIP S 1-16F
C333	87-010-829-019	CAP, CHIP SS 0.047-16F
C334	87-010-829-019	CAP, CHIP SS 0.047-16F
C335	87-010-829-019	CAP, CHIP SS 0.047-16F
C336	87-010-829-019	CAP, CHIP SS 0.047-16F
C337	87-012-270-019	CAP, CHIP SS 470P-50 B
C338	87-012-270-019	CAP, CHIP SS 470P-50 B
C339	87-010-787-019	CAP, CHIP SS 0.022-25B
C340	87-010-787-019	CAP, CHIP SS 0.022-25B
C341	87-010-805-019	CAP, CHIP S 1-16F
C342	87-010-805-019	CAP, CHIP S 1-16F
C401	87-010-673-019	CAP, CHIP ELECT 100-2
C402	87-010-668-019	CAP, CHIP ELECT 220-4 MV
C403	87-010-668-019	CAP, CHIP ELECT 220-4 MV
C405	87-010-082-019	CAP, ELECT 220-4 5L
C406	87-010-640-019	CAP, CHIP TANTALUM 22-4
C407	87-010-082-019	CAP, ELECT 220-4 5L
C408	87-010-805-019	CAP, CHIP S 1-16F
C409	87-010-805-019	CAP, CHIP S 1-16F
C410	87-010-424-019	CAP, CHIP TANTALUM 4.7-4
C411	87-010-746-019	CAP, CHIP TANTALUM 10-4
C412	87-010-746-019	CAP, CHIP TANTALUM 10-4
C413	87-010-196-019	CAP, CHIP S 0.1-25 F
C414	87-010-196-019	CAP, CHIP S 0.1-25 F
C415	87-015-933-019	CAP, CHIP TANTALUM 1-10
C416	87-015-934-019	CAP, CHIP TANTALUM 2.2-4
J1	87-049-549-119	JACK, DC(DC 2V)
LED1	87-001-573-019	LED, SLC22 VR(OPE/BATT)
R351	87-022-439-080	RES, CHIP 510-1/16W F
R352	87-022-439-080	RES, CHIP 510-1/16W F
R428	87-022-042-019	RES, CHIP M/F 0.51-1/8W
R429	87-022-043-019	RES, CHIP M/F 8.2K-1/8W
SFR301	87-024-076-019	SFR, 1K
SOL1	87-045-310-010	SOLENOID(PLAY)
SW1	87-036-201-019	SLIDE SW(FWD/REV)
SW2	87-036-123-019	SLIDE SW(TAPE)
SW3	87-036-123-019	SLIDE SW(DOLBY NR)
SW4	87-036-123-019	SLIDE SW(DSL)
SW5	87-036-145-019	SLIDE SW(REMOTE)
SW6	87-036-073-019	TACT SW(STOP)
SW7	87-036-073-019	TACT SW(PLAY/DIR)
SW8	87-036-199-010	LEAF SW(POWER)(LATCH)
SW9	87-036-144-019	PUSH SW(CASSETTE)
SW10	87-036-203-019	SLIDE SW(FF/REW)
SW11	87-036-083-019	PUSH SW(HP SW)
VR1	87-024-361-019	VR, 20KAX2(VOLUME)
===HEAD FLEX. CIRCUIT BOARD SECTION===		
PH	87-046-381-010	HEAD ASSY(W/PCB-C)
===JACK FLEX. CIRCUIT BOARD SECTION===		
J2	87-009-218-019	JACK, 3.5 BK(PHONES)
PCB-D	80-HK4-604-010	FLEXIBLE CIRCUIT BOARD 4P
===MISCELLANEOUS===		
M1	87-045-309-010	MOTOR ASSY
TM1	82-HR4-204-010	BATTERY CONTACT

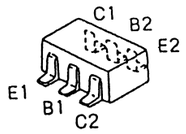
TRANSISTOR ILLUSTRATION



2SA1213



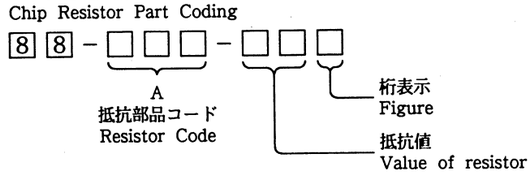
2SC4116
RN1310
RN2310



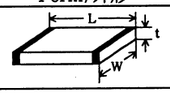
HN1A01F
HN1C01F
HN1C03FB
RN4605
RN4607
RN4610

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



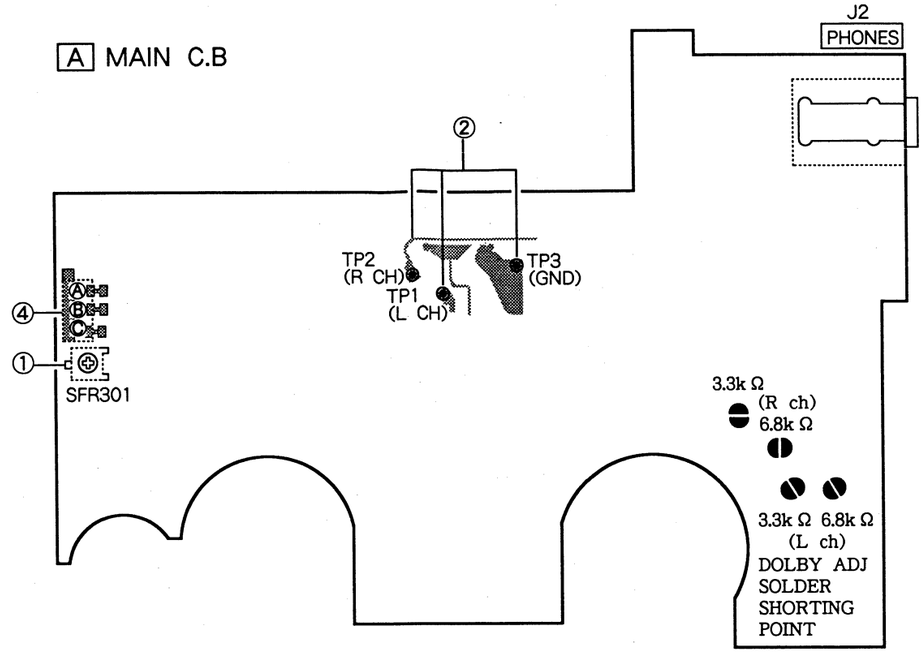
チップ抵抗
Chip resistor

Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法 (mm) Form/外形	L	W	t	Resistor Code : A 抵抗コード : A
1/32W	1608	±5%	CJ		1.6	0.8	0.35	108
1/10W	2125	±5%	CJ		2	1.25	1.45	118
1/8W	3126	±5%	CJ		3.2	1.6	0.5 ~0.7	128

■ACCESSORIES／PACKAGE LIST

REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
1	84-HK5-901-010		INSTRUCTION BOOKLET〈PX537〉
2	84-HKB-901-010		INSTRUCTION BOOKLET〈PX337〉
3	87-042-141-010		AC-207E2〈AE, AE1, AZ1〉
4	87-042-163-010		AC-207HA〈AHJ1〉
5	87-048-229-010		HP-MR30〈AE〉
6	87-048-242-010		HP-R36NA〈AHJ1, AE1, AZ1〉
7	87-048-238-010		HP-23NA〈Y1, YJ1, YZ1〉
8	87-048-230-010		HP-A270 A〈Y〉
9	87-047-116-010		PB-4 NA Y〈PX537〉
10	82-HJ4-951-110		CARRYING, CASE〈YJ1, YZ1, AHJ1, AZ1〉

ADJUSTMENT



＜TAPE PLAYER SECTION＞

1. Tape Speed Adjustment
   Settings : • Test tape : TTA-100
   • Test point : PHONES JACK
   • Adjustment location : SFR301
   Method : Play back the test tape, adjust for 3000 + 10Hz, − 5Hz at FWD and less than 45Hz at REV.

2. Dolby Level Adjustment
   Settings : • Test tape : TTA-200
   • Test point : TP1 (L ch), TP2 (R ch), TP3 (GND)
   • DOLBY SW : OFF
   • TAPE SELECTOR : NORM
   • VOLUME : MIN "0"
   Method : Connect at electrolytic capacitor (10 μF/16V) to measured equipment and TP1 (2).
   • Play back the tape in forward mode, and check that the test point level is 100mV ± 10mV.
   If it is out of this specification, make solder-touch.(See the following table.) Also play back the tape in the reverse mode, and check that the voltage is within ± 2.0dB of the voltage at forward mode.

No.	a	b	c	d
6.8k Ω		○		○
3.3k Ω			○	○

0.6dB 0.6dB 0.5dB

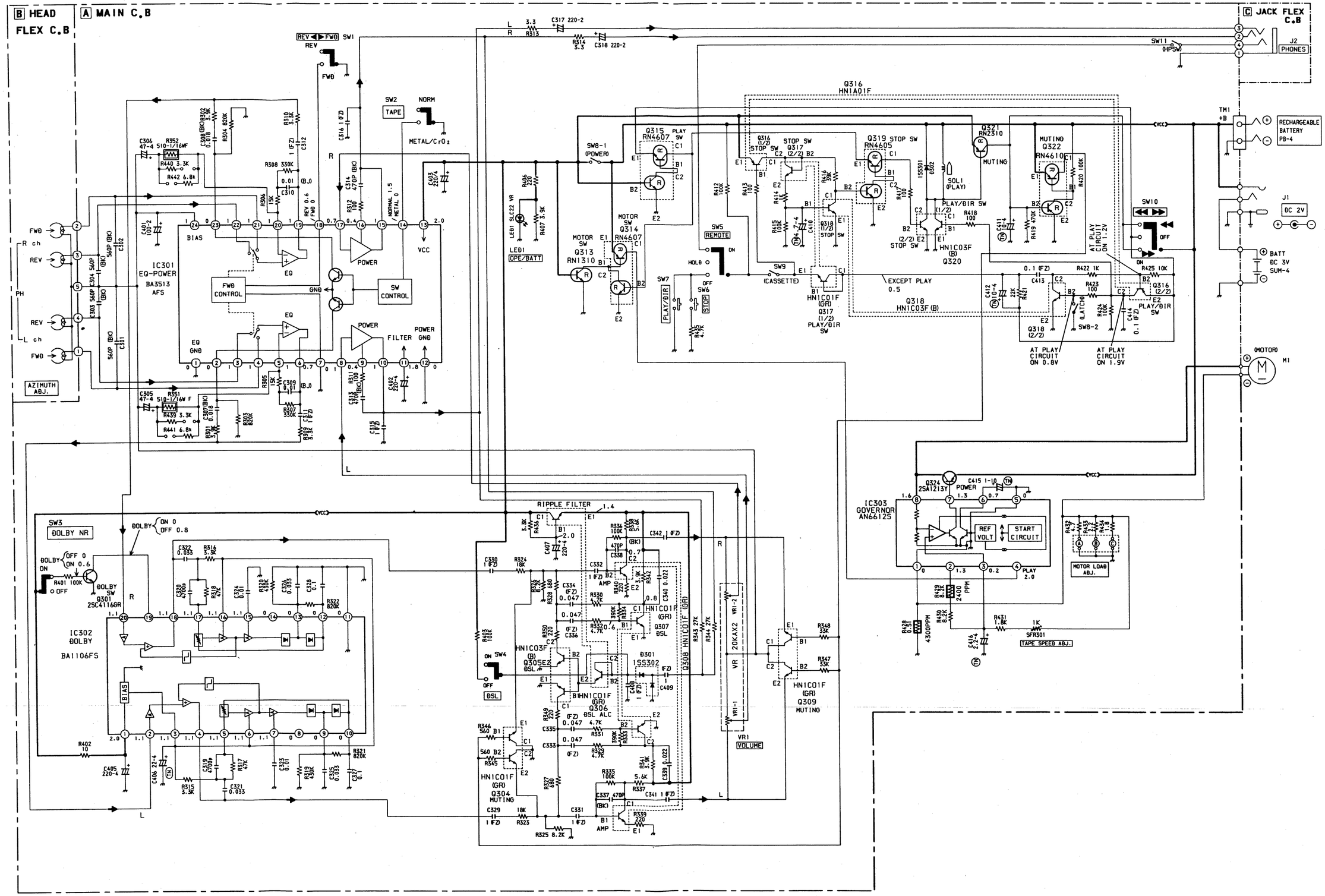
LEVEL ⟶ UP

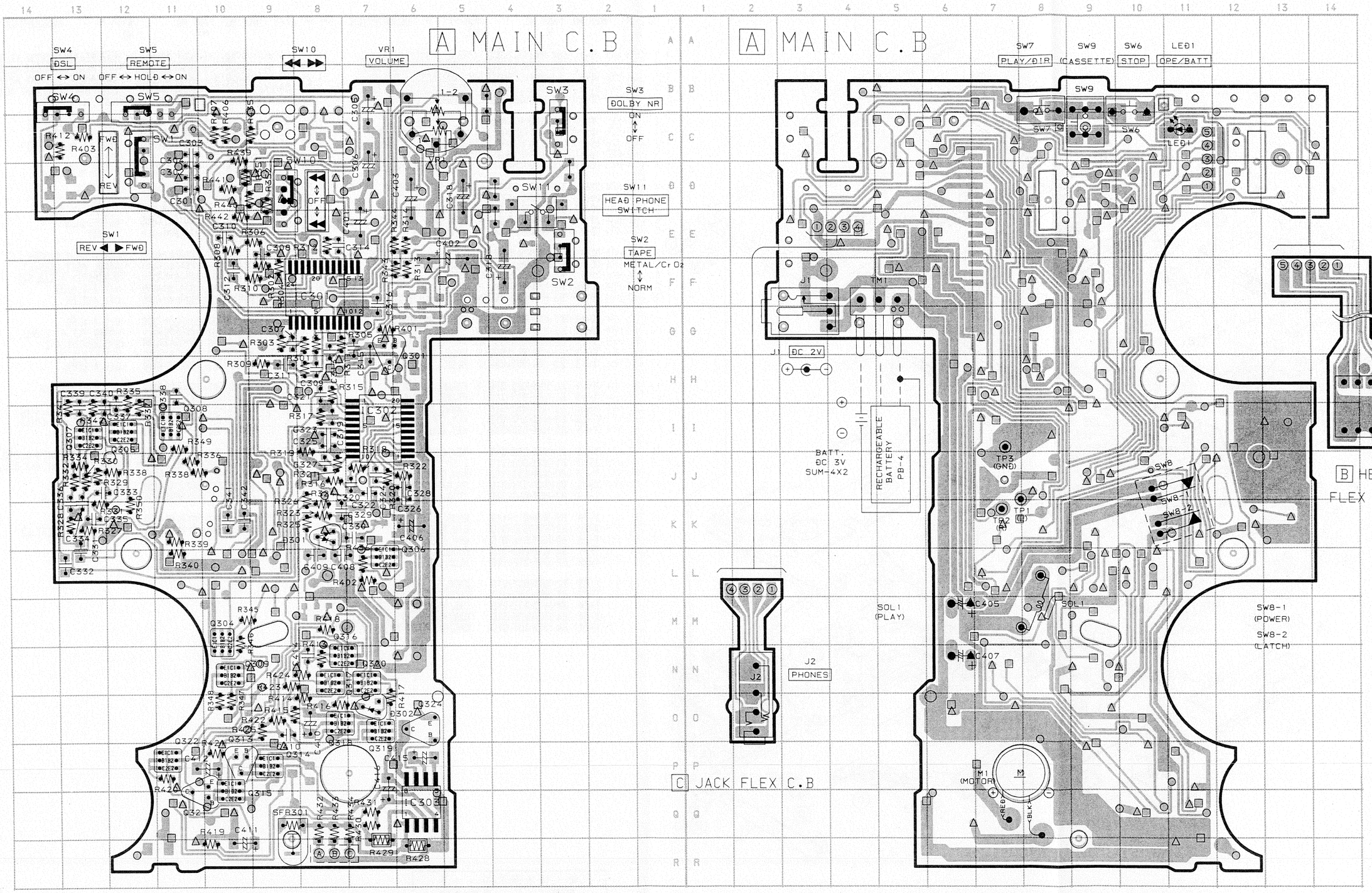
3. Azimuth Adjustment
   This model is no Azimuth adjustment.

4. Motor load Adjustment
   Refer to the REF No. SI•88-037-OP of service technical information.

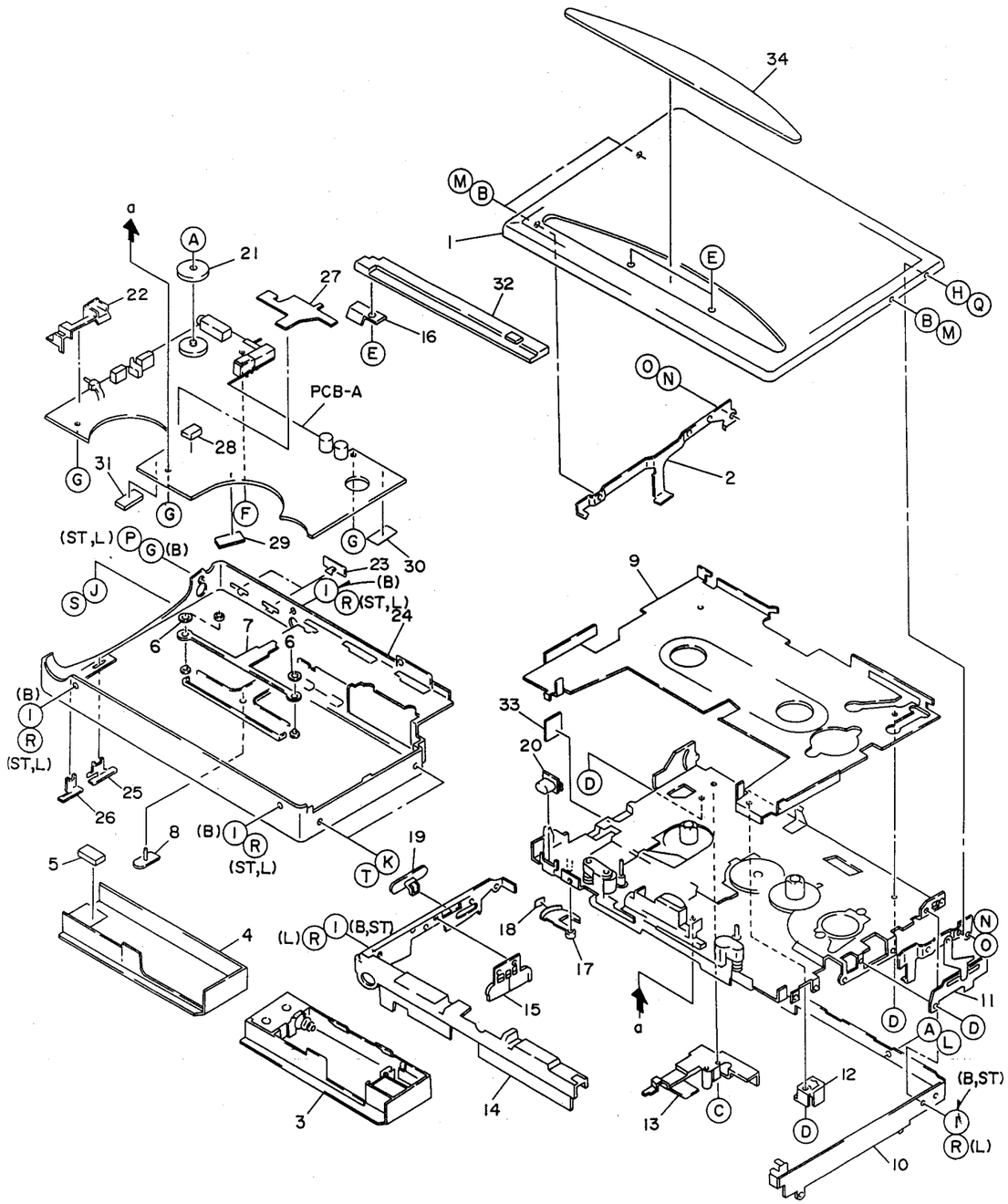
PRACTICAL SERVICE FIGURE

Tape speed :	3000 ± 60Hz
Wow & flutter :	Less than 0.45% (JIS)
Take-up torque :	20g-cm～37g-cm (FWD, REV)
F.F & Rew torque :	110 ± 40g-cm
Back tension :	3 ± 1.5g-cm (FWD, REV)
S/N ratio :	More than 45dB
Distortion :	Less than 3.0%
Noise level :	Less than 3.0mV (VOL MAX)
Frequency response :	63Hz − 8dB～8kHz ± 4dB (NORMAL)


B HEAD FLEX C.B
A MAIN C.B
C JACK FLEX C.B
REV◀▶FWD SW1
SW2 TAPE
NORM
METAL/CrO2
SW11 (HP SW)
J2 PHONES
Q316 HN1A01F
TM1 +B
RECHARGEABLE BATTERY PB-4
SW8-1 (POWER)
Q315 RN4607 PLAY SW
Q316 (1/2) STOP SW
Q317 (2/2) STOP SW
Q319 STOP SW RN4605
Q321 RN2310 MUTING
MUTING Q322 RN4610
SOL1 (PLAY)
PLAY/DIR SW (1/2)
(2/2) STOP SW
HN1C03F (B) Q320
SW10
J1 DC 2V
BATT DC 3V SUM-4
IC301 EQ-POWER BA3513 AFS
BIAS
EQ
POWER
FWD CONTROL
SW CONTROL
FILTER
VCC
GND
R ch
L ch
PH
AZIMUTH ADJ.
MOTOR SW Q314 RN4607
Q313 RN1310
LED1 SLC22 VR
LED1 OPE/BATT
SW5 REMOTE
SW6 STOP
SW7 PLAY/DIR
SW9 (CASSETTE)
EXCEPT PLAY 0.5
Q318 HN1C03F (B)
HN1C01F (GR) Q317 (1/2) PLAY/DIR SW
AT PLAY CIRCUIT ON 1.2V
AT PLAY CIRCUIT ON 0.8V
AT PLAY CIRCUIT ON 1.9V
Q318 (2/2)
SW8-2 (LATCH)
PLAY/DIR SW
Q316 (2/2)
(MOTOR) M1
Q324 2SA1213Y POWER
IC303 GOVERNOR AN6612S
REF VOLT
START CIRCUIT
MOTOR LOAD ADJ.
TAPE SPEED ADJ.
SW3 DOLBY NR
DOLBY ON 0 OFF 0.8
DOLBY SW Q301 2SC4116GR
IC302 DOLBY BA1106FS
SW4
RIPPLE FILTER
Q307 BSL
Q308 HN1C01F (GR)
Q306 BSL ALC
Q304 MUTING
Q309 MUTING
VR1 VOLUME
20KAX2
AMP


A MAIN C.B
SW4
DSL
OFF ↔ ON
SW5
REMOTE
OFF ↔ HOLD ↔ ON
SW10
VR1
VOLUME
SW3
DOLBY NR
ON
OFF
SW11
HEAD PHONE SWITCH
SW2
TAPE
METAL/Cr O2
NORM
SW1
REV ◀ ▶ FWD
FWD
REV
IC301
IC302
IC303
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
Q309
Q310
Q311
Q312
Q313
Q314
Q315
Q316
Q317
Q318
Q319
Q320
Q321
Q322
Q323
Q324
Q330
Q331
Q332
Q333
D301
D302
SFR301
A MAIN C.B
SW7
PLAY/DIR
SW9
(CASSETTE)
SW6
STOP
LED1
OPE/BATT
J1
TM1
J1 DC 2V
BATT.
DC 3V
SUM-4X2
RECHARGEABLE BATTERY
PB-4
TP3
(GND)
TP1
TP2
(A)
SW8
SW8-1
SW8-2
PH
B HEAD
FLEX C.B
SOL1
(PLAY)
M1
(MOTOR)
SW8-1
(POWER)
SW8-2
(LATCH)
J2
PHONES
C JACK FLEX C.B

EXPLODED VIEW – 1



MECHANICAL PARTS LIST

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1-1	84-HKB-001-010		LID, CASS[B]〈PX337〉
1-1	84-HKB-002-010		LID, CASS[ST]〈PX337〉
1-1	84-HKB-008-010		LID, CASS[L]〈PX337〉
1-1	84-HK5-001-010		LID, CASS[B]〈PX537〉
1-1	84-HK5-008-010		LID, CASS[ST]〈PX537〉
1-2	84-HK5-201-019		HLDR, CASS R
1-3	09-028-106-010		BATT BOX ASSY[B]
1-3	09-028-007-010		BATT BOX ASSY[ST]
1-3	09-028-107-010		BATT BOX ASSY[L]
1-4	84-HK5-006-019		BOX, BAT PB4[B]
1-4	82-HR4-035-019		BOX, BAT PB4[ST]
1-4	84-HKB-010-019		BOX, BAT PB4[L]
1-5	82-HR4-218-119		CUSH-S, BATT
1-6	82-HR4-215-019		SH-DIA, 2.4-6-0.3
1-7	82-HR4-211-219		LEVER, LOCK
1-8	82-HR4-018-019		KNOB, SL BOX[B]
1-8	82-HR4-051-019		KNOB, SL BOX[ST]
1-8	84-HKB-012-019		KNOB, SL BOX[L]
1-9	82-HR4-209-019		HLDR, CHAS
1-10	83-HR4-006-019		FRAME, BOTTOM[B]
1-10	82-HR4-004-119		FRAME, BOTTOM[ST]
1-10	82-HR4-034-019		FRAME, BOTTOM[L]
1-11	82-HKB-204-010		ARM, SLIDE ASSY
1-12	82-HR4-203-019		HLDR, JACK DC
1-13	82-HR4-202-119		HLDR, JACK HP
1-14	83-HR4-005-019		FRAME, CONT[B]
1-14	82-HR4-003-119		FRAME, CONT[ST]
1-14	82-HR4-033-019		FRAME, CONT[L]
1-15	83-HR4-007-019		KEY, CONT[B]
1-15	82-HR4-010-019		KEY, CONT[ST]
1-15	82-HR4-058-019		KEY, CONT[L]
1-16	81-HR3-208-110		T-SP, UP
1-17	80-HK4-213-110		ARM, DR MONITOR
1-18	80-HK4-234-019		SH, DIRECTION
1-19	82-HR4-059-019		KNOB, SL FR[B, L]
1-19	82-HR4-011-119		KNOB, SL FR[ST]
1-20	82-HR4-060-019		BTN, EJECT[B, L]
1-20	82-HR4-012-019		BTN, EJECT[ST]
1-21	84-438-009-210		KNOB, VOL
1-22	82-HR4-210-119		HLDR, LED
1-23	82-HR4-007-019		KNOB, SL TAPE[B]
1-23	82-HR4-055-019		KNOB, SL TAPE[ST, L]
1-24	84-HKB-003-019		CAB, REAR[B]〈PX337 Y, Y1, YZ1〉
1-24	84-HKB-005-019		CAB, REAR[B]〈PX337 YJ1〉
1-24	84-HKB-004-019		CAB, REAR[ST]〈PX337 Y, Y1, YZ1〉
1-24	84-HKB-009-019		CAB, REAR[L]〈PX337 Y1, YZ1〉
1-24	84-HK5-004-019		CAB, REAR[B]〈PX537 AE, AE1, AZ1〉
1-24	84-HK5-005-019		CAB, REAR[B]〈PX537 AHJ1〉
1-24	84-HK5-009-019		CAB, REAR[ST]〈PX537 AE1, AZ1〉
1-25	82-HR4-009-119		KNOB, SL RMT[B]
1-25	82-HR4-057-019		KNOB, SL RMT[ST, L]
1-26	82-HR4-008-119		KNOB, SL DSL[B]
1-26	82-HR4-056-019		KNOB, SL DSL[ST, L]
1-27	82-HR4-216-019		SH, AF
1-28	82-HR4-597-019		CLOTH 6-8
1-29	80-ZM1-314-019		SH, 2-2-1
1-30	82-HR4-217-019		SH, 15-10
1-31	82-HR4-222-019		CUSH-S 12-5-2
1-32	82-HK5-261-010		GUIDE, CASS
1-33	80-HJ3-618-019		SH, BAT
1-34	84-HK5-002-010		PANEL ASSY, CASS[B, ST]
1-34	84-HKB-014-010		PANEL ASSY, CASS[L]
A	87-067-511-019		S-SCREW+1.4-2[B, ST]
B	87-067-753-019		V+1.4-1.6[B]
C	87-232-508-319		Q+1.4-3.5H
D	87-261-501-319		V+1.4-1.6B
E	87-067-385-019		SCREW VT1.4×2.5HL
F	87-067-437-019		S-SCREW M1.4-2
G	87-067-384-019		VT1.4-3.5 HL
H	87-067-593-019		Q+1.4-2[B]
I	87-067-359-019		S-SCREW+1.4-2.5
J	87-067-405-019		VT1.4-6 HL[B]
K	87-067-595-019		SCREW HINGE M1.4[B]
L	87-067-850-019		S-SCREW+1.4-2 CR[L]
M	87-067-754-019		V+1.4-6[ST, L]
N	82-690-231-019		PANEL SCREW M1.4-2.6[B, ST]
O	82-690-224-019		PANEL SCREW M1.4-2.6[L]
P	87-067-535-019		VT1.4-3.5
Q	87-067-592-019		Q+1.4-2[ST, L]
R	87-067-429-019		S-SCREW+1.4-2.5
S	87-067-949-019		VT1.4-6[ST, L]
T	87-067-594-019		S-SCREW HM1.4[ST, L]

サービス技術ニュース	
番号	連絡内容
G－ －	
G－ －	
G－ －	

アイワ株式会社
AIWA CO.,LTD.
〒110 東京都台東区池之端1－2－11 ☎03 (3827) 3111 (代表)
920074, 750038
Tokyo Japan
Printed in Singapore